

REMARKS

Applicants respectfully request reconsideration of the present Application. Claims 1, 42, and 47 have been amended herein, and claim 45 has been canceled. Care has been exercised to introduce no new matter. Claims 1-7, 9, 12-18, 42-44, and 46 are pending and are in condition for allowance.

Rejections based on 35 U.S.C. § 103

A). Applicable Authority

Title 35 U.S.C. § 103(a) declares, a patent shall not issue when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” The Supreme Court in *Graham v. John Deere* counseled that an obviousness determination is made by identifying: the scope and content of the prior art; the level of ordinary skill in the prior art; the differences between the claimed invention and prior art references; and secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1 (1966). To support a finding of obviousness, the initial burden is on the Office to apply the framework outlined in *Graham* and to provide some reason, suggestion, or motivation either in the prior art references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the prior art reference, or to combine prior art reference teachings, to produce the claimed invention. See, *Application of Bergel*, 292 F. 2d 955, 956-957 (1961). Recently, the Supreme Court elaborated, at pages 13-14 of the *KSR* opinion, that “it will be necessary for [the Office] to look at interrelated teachings of multiple [prior art references]; the effects of demands known to the design community or present in the marketplace; and the

background knowledge possessed by [one of] ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the [patent application].” *KSR v. Teleflex*, 127 S. Ct. 1727 (2007).

B). Rejection of Claims 1, 2, 4, 6, 9, 12-16, and 18

Claims 1, 2, 4, 6, 9, 12-16, and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2005/0060643 to Glass et al. (hereinafter the “Glass reference”) in view of U.S. Publication No. 2004/0102366 to Kirsch (hereinafter the “Kirsch reference”) in further view of U.S. Publication No. 2004/0054498 to Shipp (hereinafter the “Shipp reference”). As the Glass, Kirsch, and Shipp references, either alone or in combination, fail to teach or suggest all of the features of the rejected claims, as amended herein, Applicants respectfully traverse this rejection, as hereinafter set forth.

Independent claim 1 recites, among other things, an analysis component that examines consecutiveness of characters within a subject line of the message and a content type of the message for spam in connection with building a filter, wherein the content type describes a type of data contained within a body of the message, the content type being case-sensitive and comprising a primary content-type, a secondary-content type, or a combination thereof, the primary content-type and the secondary-content type comprising at least one of a text, a multipart, a message, an image, an audio, a video, or an application. Examination of the content type identified in the message can help detect and identify spam since spammers attempt to mimic qualities of non-spam messages. *See e.g.*, pg. 9, lines 11-12 and pg. 18, lines 1-2. The content type can be case-sensitive to more accurately capture variations in content-type notations provided by message sending applications. *See e.g.*, pg. 3, lines 23-25. Further, content-type can be case-sensitive to more accurately capture variations of primary and/or secondary MIME

content types. *See e.g.*, pg. 9, lines 12-14. Additionally, primary content-type and secondary content-type can help identify messages that are forged or misrepresented to make the message appear to be non-spam. *See e.g.*, pg. 3, lines 16-19 and pg. 14, lines 5-7.

It is respectfully submitted that the cited references fail to teach or suggest an analysis component that examines a content type of the message for spam in connection with building a filter, wherein the *content type describes type of data contained within a body of the message*, the content type being *case-sensitive* and comprising a primary content-type, a secondary content-type, or a combination thereof, the primary content-type and the secondary-content type *comprising at least one of a text, a multipart, a message, an image, an audio, a video, or an application*. As stated in the Office Action, neither the Glass nor the Kirsch reference teach or suggest “examination of a content type of the message, where the content type is case-sensitive, in connection with building a filter, where the content type describes data contained within the body of the message.” *See Office Action dated 12/08/09, Pg. 3.*

Initially, the Glass reference relates to document similarity detection and a classification system. The Glass reference compares documents to determine a highest level of resemblance between an unclassified document and a set of previously classified documents. *See Glass, Abstract.* The Glass reference is concerned with preclassifying documents to aid in comparing the documents. This is simply placing the documents in a similar format for comparison. The Glass reference does not teach or suggest an analysis component that examines a content type of the message for spam in connection with building a filter, wherein the content type describes type of data contained within a body of the message, the content type being case-sensitive and comprising a primary content-type, a secondary content-type, or a combination thereof, the primary content-type and the secondary-content type comprising at least one of a

text, a multipart, a message, an image, an audio, a video, or an application, as recited in amended independent claim 1.

The Kirsch reference is directed to using a ruleset to classify email messages. *See Kirsch*, Abstract. The Kirsch reference mentions “identifying certain senders or content, etc., as spam.” *See id.* at ¶[0004]. Although the Kirsch reference mentions identifying content, it is respectfully submitted that the Kirsch reference fails to teach or suggest an analysis component that examines a content type of the message for spam in connection with building a filter, wherein the content type describes type of data contained within a body of the message, the content type being case-sensitive and comprising a primary content-type, a secondary content-type, or a combination thereof, the primary content-type and the secondary-content type comprising at least one of a text, a multipart, a message, an image, an audio, a video, or an application, as recited in amended independent claim 1.

Further, the Shipp reference fails to overcome the deficiencies of the Glass and Kirsch reference. The Shipp reference is directed to “monitor[ing] email traffic patterns to identify patterns characteristic of a virus outbreak and tak[ing] corrective action when an outbreak is detected.” *See Shipp*, Abstract. In Shipp, a message digest might be generated for messages logged in a database. *See id.* at ¶[0050]. “Message digests are a convenient and efficient means of identifying messages with the same message text and as a ‘handle’ by which to retrieve a collection of log entries which represent the same message text being sent in multiple emails.” *See id.* at ¶[0050]. A digest is fixed length that is smaller than the original message. *See id.* at ¶[0052]. As an example provided in Shipp, “the MD5 digest of ‘The rain in spain falls mainly on the plain’ is 6f8f4c35a219625efc5a9ebad8fa8527 and of ‘The rain in Spain falls mainly on the plain’ is b417b67704f2dd2b5a812f99ade30e00. These two messages

differ only by one bit (the 's' in Spain, since a capital S is one bit different to a lowercase s in the ASCII character set), but the digests are totally different.” *See id.* at ¶¶ [0055].

While the Shipp reference discusses case sensitivity in generating message digests (i.e., using a hashing algorithm), it is respectfully submitted that the Shipp reference does not teach or suggest an analysis component that *examines a content type* of the message for spam *in connection with building a filter*, wherein the *content type describes a type of data contained within a body of the message*, the content type being case-sensitive and comprising a primary content-type, a secondary content-type, or a combination thereof, the primary content-type and the secondary-content type comprising at least one of a text, a multipart, a message, an image, an audio, a video, or an application, as recited in amended independent claim 1. Rather, the Shipp reference merely discusses using case sensitivity in generating message digests. *See id.* at ¶¶ [0050] and [0055]. Using case sensitivity to generate message digests is in stark contrast to monitoring *a content type* of the message for spam *in connection with building a filter*, wherein the *content type describes a type of data contained within a body of the message*, the content type being *case-sensitive* and comprising a primary content-type, a secondary content-type, or a combination thereof, the primary content-type and the secondary-content type *comprising at least one of a text, a multipart, a message, an image, an audio, a video, or an application*, as recited in amended independent claim 1.

Accordingly, for at least the above reasons, it is respectfully submitted that the Glass, Kirsch, and Shipp references, whether taken alone or in combination, fail to teach or suggest all of the features of independent claim 1, as amended herein. Each of claims 2, 4, 6, 9, 12-16, and 18 depend, either directly or indirectly, from amended independent claim 1. Accordingly, it is respectfully submitted that the Glass, Kirsch, and Shipp references fail to teach

or suggest all of the features of these claims for at least the above-cited reasons. As such, withdrawal of the 35 U.S.C. § 103(a) rejections of claims 1, 2, 4, 6, 9, 12-16, and 18 is respectfully requested. Each of claims 1, 2, 4, 6, 9, 12-16, and 18 is believed to be in condition for allowance and such favorable action is respectfully requested.

C). Rejection of Claims 3, 7, and 17

Claims 3, 7, and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2005/0060643 to Glass et al. (hereinafter the “Glass reference”) in view of U.S. Publication No. 2004/0102366 to Kirsch (hereinafter the “Kirsch reference”) in further view of U.S. Publication No. 2004/0054498 to Shipp (hereinafter the “Shipp reference”) in further view of Official Notice. As the Glass, Kirsch, and Shipp references and Official Notice, either alone or in combination, fail to teach or suggest all of the features of claims 3, 7, and 17, Applicants respectfully traverse this rejection.

For at least the above reasons, it is respectfully submitted that the Glass, Kirsch, and Shipp references, whether taken alone or in combination, fail to teach or suggest all of the features of independent claim 1, from which claims 3, 7, and 17 depend. Accordingly, it is respectfully submitted that the Glass, Kirsch, and Shipp references and Official Notice fail to teach or suggest all of the features of claims 3, 7, and 17 for at least the above-cited reasons. As such, withdrawal of the 35 U.S.C. § 103(a) rejections of claims 3, 7, and 17 is respectfully requested. Each of claims 3, 7, and 17 is believed to be in condition for allowance and such favorable action is respectfully requested.

D). Claims 5, 42, 43, 45, and 46

Claims 5, 42, 43, 45, and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2005/0060643 to Glass et al. (hereinafter the “Glass

reference”) in view of U.S. Publication No. 2004/0102366 to Kirsch (hereinafter the “Kirsch reference”) in further view of U.S. Publication No. 2004/0054498 to Shipp (hereinafter the “Shipp reference”) in further view of U.S. Publication No. 2008/0168145 to Wilson (hereinafter the “Wilson reference). Claim 45 has been canceled herein and, as such, the rejection of claim 45 is rendered moot. As the Glass, Kirsch, Shipp, and Wilson references, either alone or in combination, fail to teach or suggest all of the features claims 5, 42, 43, and 46, Applicants respectfully traverse this rejection.

For at least the above reasons in association with independent claim 1, it is respectfully submitted that the Glass, Kirsch, and Shipp references, whether taken alone or in combination, fail to teach or suggest all of the features of independent claim 1, from which claim 5 depends. Further, the Wilson reference fails to overcome the deficiencies of the Glass, Kirsch, and Shipp references with respect to independent claim 1. Accordingly, it is respectfully submitted that the Glass, Kirsch, Shipp, and Wilson references fail to teach or suggest all of the features of claim 5 for at least the above-cited reasons. As such, withdrawal of the 35 U.S.C. § 103(a) rejections of claim 5 is respectfully requested. Claim 5 is believed to be in condition for allowance and such favorable action is respectfully requested.

With respect to independent claim 42, independent claim 42, as amended herein recites, among other things, examining the extracted set of features to identify a frequency consecutiveness of repeating characters within a subject line of the message and to identify a distance of white-space characters between at least one alpha-numeric character and a blob comprising a random sequence of characters, numbers, punctuation, or a combination thereof to classify the message as spam or not spam; establishing ranges of consecutive, repeating characters, the ranges correspond to various degrees of spaminess, wherein each range comprises

a number range of frequencies of the consecutive, repeating characters within the subject line of the message; employing the ranges to sort the message by the frequency of consecutive repeating characters within the subject line of the message. It is respectfully submitted that the cited references fail to teach or suggest such a feature.

Initially, the Glass reference relates to document similarity detection and a classification system. The Glass reference compares documents to determine a highest level of resemblance between an unclassified document and a set of previously classified documents. *See Glass*, Abstract. The Glass reference mentions “[d]etecting messages that have suspicious subject line patterns, such as a series of numbers, as in the case of a subject line like ‘Limited Time Offer 4098309489.’” *See Glass*, ¶[0056]. Although the Glass reference mentions detecting messages with suspicious subject line patterns, the Glass references does not teach or suggest (1) identifying a frequency of consecutiveness of repeating characters within a subject line of the message to classify the message as spam or not spam; (2) establishing ranges of consecutive, repeating characters, the ranges correspond to various degrees of spaminess, wherein each range comprises a number range of frequencies of the consecutive, repeating characters within the subject line of the message; or (3) employing the ranges to sort the message by the frequency of consecutive repeating characters within the subject line of the message, as recited in claim 42, as amended herein.

The Kirsch reference is directed to using a ruleset to classify email messages. *See Kirsch*, Abstract. The Kirsch reference mentions that sample rules might include “1) whether there are two consecutive spaces n the subject line and 2) whether there are more than four ‘non-English’ words in the body.” *See id.* at ¶[0021]. Although the Kirsch reference mentions consecutive spaces in a subject line, it is respectfully submitted that the Kirsch reference fails to

teach or suggest (1) identifying a frequency of consecutiveness of repeating characters within a subject line of the message to classify the message as spam or not spam; (2) establishing ranges of consecutive, repeating characters, the ranges correspond to various degrees of spaminess, wherein each range comprises a number range of frequencies of the consecutive, repeating characters within the subject line of the message; or (3) employing the ranges to sort the message by the frequency of consecutive repeating characters within the subject line of the message, as recited in claim 42, as amended herein. Rather, in Kirsch, there is merely a discussion of the presence of consecutive spaces in the subject line. This is in stark contrast to identifying a frequency of consecutiveness of repeating characters within a subject line of the message to classify the message as spam or not spam; establishing ranges of consecutive, repeating characters, the ranges correspond to various degrees of spaminess, wherein each range comprises a number range of frequencies of the consecutive, repeating characters within the subject line of the message; employing the ranges to sort the message by the frequency of consecutive repeating characters within the subject line of the message, as recited in claim 42, as amended herein.

Further, the Shipp reference fails to overcome the deficiencies of the Glass and Kirsch reference. The Shipp reference is directed to “monitor[ing] email traffic patterns to identify patterns characteristic of a virus outbreak and tak[ing] corrective action when an outbreak is detected.” *See Shipp*, Abstract. In Shipp, a message digest might be generated for messages logged in a database. *See id.* at ¶ [0050]. “Message digests are a convenient and efficient means of identifying messages with the same message text and as a ‘handle’ by which to retrieve a collection of log entries which represent the same message text being sent in multiple emails.” *See id.* at ¶ [0050]. A digest is fixed length that is smaller than the original message. *See id.* at ¶ [0052]. As an example in Shipp, “the MD5 digest of ‘The rain in Spain

falls mainly on the plain' is 6f8f4c35a219625efc5a9ebad8fa8527 and of 'The rain in Spain falls mainly on the plain' is b417b67704f2dd2b5a812f99ade30e00. These two messages differ only by one bit (the 's' in Spain, since a capital S is one bit different to a lowercase s in the ASCII character set), but the digests are totally different." *See id.* at ¶ [0055].

While the Shipp reference discusses generating message digests (i.e., using a hashing algorithm), it is respectfully submitted that the Shipp reference does not teach or suggest (1) identifying a frequency of consecutiveness of repeating characters within a subject line of the message to classify the message as spam or not spam; (2) establishing ranges of consecutive, repeating characters, the ranges correspond to various degrees of spaminess, wherein each range comprises a number range of frequencies of the consecutive, repeating characters within the subject line of the message; or (3) employing the ranges to sort the message by the frequency of consecutive repeating characters within the subject line of the message, as recited in claim 42, as amended herein.

Accordingly, for at least the above reasons, it is respectfully submitted that the Glass, Kirsch, and Seifert references, whether taken alone or in combination, fail to teach or suggest all of the features of independent claim 42, as amended herein. Each of claims 43 and 45-46 depend, either directly or indirectly, from amended independent claim 42. Accordingly, it is respectfully submitted that the Glass, Kirsch, and Seifert references fail to teach or suggest all of the features of these claims for at least the above-cited reasons. As such, withdrawal of the 35 U.S.C. § 103(a) rejections of claims 42-43 and 45-46 is respectfully requested. Each of claims 42-43 and 45-46 is believed to be in condition for allowance and such favorable action is respectfully requested.

E). Claim 47

For at least the above-noted reasons set forth with respect to claim 1, Applicants believe independent claim 47 is in condition for allowance and such favorable action is respectfully requested. In addition, independent claim 47 includes other features not taught or suggested by the Glass, Kirsch, and Shipp references. For example, none of the cited references teach or suggest (1) determining a particular portion of a body of the message to analyze; (2) determining at least one of a percentage of white space to non-white space in the message and a percentage of non-white space and nonnumeric characters that are not letters in the message; (3) calculating a delivery time for the message using a first timestamp associated with origination of the message and a second timestamp associated with receipt of the message; and (4) categorizing the delivery time into one of a plurality of ranges comprising a range of amounts of time for delivering messages, the ranges corresponding to various degrees of spaminess.

Conclusion

For at least the reasons stated above, claims 1-7, 9, 12-18, and 42-44, and 46 are now in condition for allowance. Applicants respectfully request withdrawal of the pending rejections and allowance of the claims. If any issues remain that would prevent issuance of this application, the Examiner is urged to contact the undersigned – 816-474-6550 or kfeimster@shb.com (such communication via email is herein expressly granted) – to resolve the same. A Request for Continued Examination is filed simultaneously herewith, along with the appropriate fee. The Commissioner is hereby authorized to charge any additional amount required, or credit any overpayment, to Account No. 19-2112.

Respectfully submitted,

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